We Claim:

1.

A fuel tank assembly, comprising:

a fuel tank having an interior constructed to contain a supply of liquid fuel and an opening arranged to communicate with a vehicle fuel filler pipe; and

a fuel flow control device disposed at least partially within the fuel tank having a fill tube with an inlet end in communication with a vehicle fuel filler pipe and an outlet end communicating with the interior of the fuel tank, the outlet end being responsive to the level of liquid fuel in the fuel tank so that the outlet end remains in the area of the surface level of liquid fuel in the fuel tank for at least some levels of liquid fuel in the fuel tank.

2.

The fuel tank assembly of claim 1 wherein the fill tube is flexible so that the outlet end can remain in the area of the surface level of liquid fuel in the fuel tank.

3.

The fuel tank assembly of claim 1 which also comprises a float that is buoyant in liquid fuel and is carried by the fill tube.

4.

The fuel tank assembly of claim 3 wherein the float is secured to the fill tube adjacent to its outlet end and maintains at least a portion of the outlet end at the surface level of liquid fuel in the fuel tank.

5.

The fuel tank assembly of claim 1 wherein at least a portion of the fill tube is buoyant in liquid fuel.

6.

The fuel tank assembly of claim 1 which also comprises a diffuser carried by the fill tube adjacent to the outlet end of the fill tube so that fuel discharged from the fill tube flows through the diffuser prior to entering the interior of the fuel tank.

7.

The fuel tank assembly of claim 6 wherein the diffuser has an inlet end and an outlet end downstream of the inlet end and the flow area of the diffuser at its outlet end is greater than the flow area of the diffuser at its inlet end.

8.

The fuel tank assembly of claim 6 wherein the diffuser is formed at least in part from a material permeable to liquid fuel so that liquid fuel may flow through the diffuser.

9.

The fuel tank assembly of claim 8 wherein the diffuser is formed at least in part of a material that permits liquid fuel flow therethrough but at least substantially prevents contaminants greater than a predetermined size from flowing out of the diffuser.

10.

The fuel tank assembly of claim 9 wherein the diffuser is formed from a mesh material having pores with an average size between 10 and 100 microns.

11.

The fuel tank assembly of claim 6 wherein the diffuser has at least one wall that is solid and does not permit fuel flow therethrough.

12.

The fuel tank assembly of claim 6 wherein the diffuser has an inlet end adjacent to the outlet end of the fill tube and an outlet end downstream of the inlet end, said outlet end of the diffuser being substantially open to the interior of the fuel tank when fuel flows through the diffuser.

13.

The fuel tank assembly of claim 6 wherein the diffuser is formed at least in part of a material that readily permits liquid fuel flow therethrough while inhibiting the flow of fuel vapor therethrough.

14.

A fuel flow control device for a fuel tank having an interior constructed to contain a supply of fuel, comprising:

a flexible fill tube disposed at least partially within the fuel tank having an inlet end through which fuel is received and an outlet end adapted for communication with the interior of the fuel tank, the outlet end being responsive to

the level of liquid fuel in the fuel tank so that the outlet end remains in the area of the surface level of liquid fuel in the fuel tank for at least some levels of liquid fuel in the fuel tank.

15.

The fuel flow control device of claim 14 which also comprises a float that is buoyant in liquid fuel and is carried by the fill tube.

16.

The fuel flow control device of claim 15 wherein the float is secured to the fill tube adjacent to its outlet end and maintains at least a portion of the outlet end at the surface level of liquid fuel in the fuel tank.

17.

The fuel flow control device of claim 14 wherein at least a portion of the fill tube is buoyant in liquid fuel so that the outlet end of the fill tube may be responsive to the level of liquid fuel in the fuel tank.

18.

The fuel flow control device of claim 14 which also comprises a diffuser carried by the fill tube adjacent to the outlet end of the fill tube so that fuel discharged from the fill tube flows through the diffuser prior to entering the interior of the fuel tank.

19.

The fuel flow control device of claim 18 wherein the diffuser has a flow area that increases as the diffuser extends away from the fill tube.

20.

The fuel flow control device of claim 18 wherein the diffuser is formed at least in part from a material permeable to liquid fuel so that liquid fuel may flow through the diffuser.

21.

The fuel flow control device of claim 20 wherein the diffuser is formed at least in part of a material that permits liquid fuel flow therethrough but at least substantially prevents contaminants greater than a predetermined size from flowing out of the diffuser.

22.

The fuel flow control device of claim 18 wherein the diffuser has at least one wall that is imperforate and does not permit fuel flow therethrough.

23.

The fuel flow control device of claim 18 wherein the diffuser is formed of a material that readily permits liquid fuel flow therethrough while inhibiting the flow of fuel vapor therethrough.

24.

The fuel flow control device of claim 18 which also comprises a float carried by one of the diffuser and the fill tube so that the outlet end of the fill tube is responsive to the level of liquid fuel in the fuel tank.

25.

A fuel flow control device for a fuel tank having an interior constructed to contain a supply of fuel, comprising:

a diffuser disposed in the fuel tank having an inlet end in which fuel is received and an outlet end adapted for communication with the interior of the fuel tank such that fuel added to the fuel tank flows through the diffuser, the diffuser having a flow area at its outlet end that is greater than the flow area at its inlet end.

26.

The fuel flow control device of claim 25 wherein the diffuser is formed at least in part from a material permeable to liquid fuel so that liquid fuel may flow through the diffuser.

27.

The fuel flow control device of claim 25 wherein the diffuser is formed at least in part of a material that permits liquid fuel flow therethrough but at least substantially prevents contaminants greater than a predetermined size from flowing out of the diffuser.

28.

The fuel flow control device of claim 27 wherein the diffuser is formed from a mesh material having pores with an average size in the range of 10 to 100 microns.

29.

The fuel flow control device of claim 25 wherein the diffuser has at least one wall that is imperforate and does not permit fuel flow therethrough.

30.

The fuel flow control device of claim 29 wherein said at least one wall that is imperforate is an upper wall of the diffuser.

31.

The fuel flow control device of claim 25 wherein the diffuser has an inlet end and an outlet end downstream of the inlet end, said outlet end of the diffuser being substantially open to the interior of the fuel tank when liquid fuel flows through the diffuser.

32.

The fuel flow control device of claim 25 wherein the diffuser is formed at least in part of a material that readily permits liquid fuel flow therethrough while inhibiting the flow of fuel vapor therethrough.

33.

The fuel flow control device of claim 25 which also comprises a fill tube having an inlet end through which fuel to be added to the fuel tank is received and an outlet end downstream of the inlet end adapted to communicate with the interior of the fuel tank, and wherein the diffuser is carried by the fill tube adjacent to its outlet end.